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ABSTRACT

In 1988, a study was conducted to determine the economic impact of Central Community College (CCC) on the surrounding communities. Using a research model developed specifically for use by public rural community colleges, the study drew upon data compiled from college records, local government sources, as well as from a survey of CCC students, staff, and faculty. Questionnaires, soliciting information on demographic characteristics and expenditure patterns, were distributed to all full- and part-time faculty and staff and a random sample of day and evening students. Study findings, based on available data and survey responses from 215 faculty/staff members (a 56% response rate) and 724 students (a 28% response rate), included the following: (1) CCC generated a total business volume in the surrounding communities of $55,213,335 for 1986-87; (2) while local property taxes paid in support of the college totaled $7,003,052 in 1986-87, personal income to local individuals in the communities resulting from college-related jobs and business activity was $75,951,900; (3) 4,241 local jobs were attributable to the presence of CCC; (4) the value of durable goods purchased with income from college-related jobs and business activity was $9,873,747; (5) college-related deposits in local banks contributed $7,482,192 to the local credit base; (6) the value of local business property committed to college-related business was $8,649,581, and the property taxes paid on that local business property totalled $3,248,830; and (7) 83% of the college's expenditures were spent locally. (AYC)

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central community college Institutional Research

THE ECONOMIC ROLE OF CENTRAL COMMUNITY COLLEGE

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On the Area Communities

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Institutional Research Department, Grand Island, NE October, 1988

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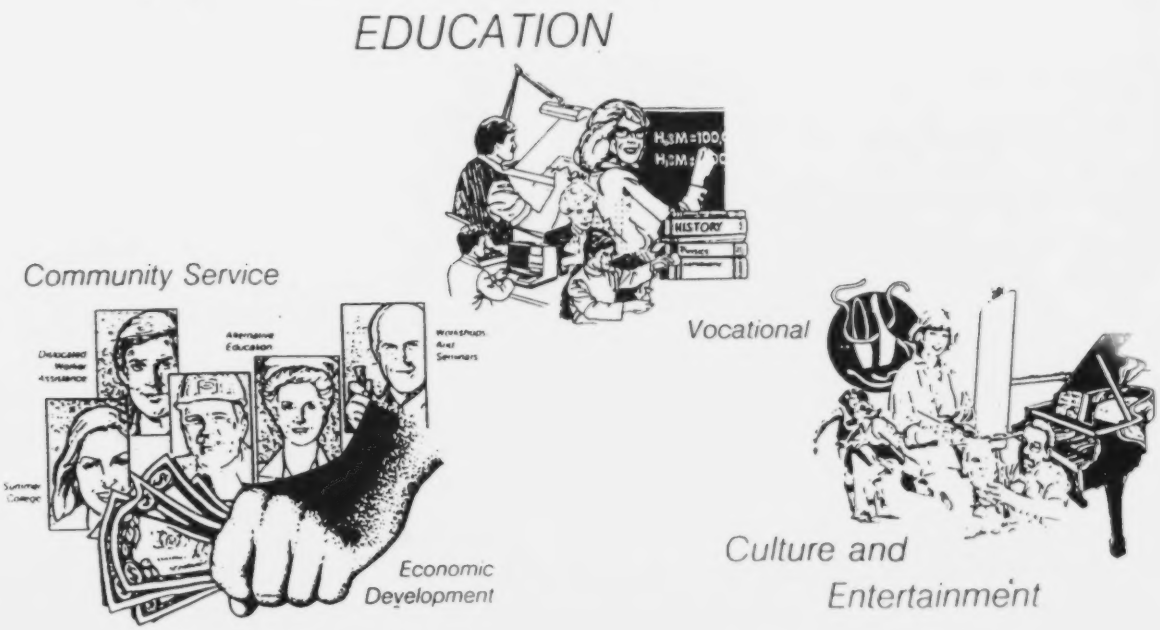
Preface

In 1973 the Nebraska Legislature passed legislation which established Central Community College as one of six technical community college areas. Since this time, Central Community College has grown in size and in diversity. Even today the campuses have continued to expand their contribution to the economic and civic welfare of the surrounding communities. New, more advanced technologies have resulted in business and industry demanding up–to–date training and retraining. The college has come to their aid by providing quality training. In addition to the tangible improvements to the communities the college serves, many social and cultural opportunities are provided.

Central Community College enriches and impacts individuals, households, and the community in many ways – some of which are visible, most of which are not. Therefore, the following economic impact study will concentrate on business volume, personal income, employment, and credit base. The measurement of the total impact—economic, social, and cultural—is beyond the scope of this study.

Central Community College

- Offers 75 associate and associate of applied science degrees, 70 one–year diplomas, and 120 certificate programs
- Works closely with business and industry in upgrading work force skills
- Enrolls over 18,000 students annually in degree programs
- Provides open enrollment for students
- Serves students who vary in age, background, and interest
- Provides three campus locations
- Generates $55 million in business volume in the area
- Generates $5 in local business volume for every dollar of operating expenditures
- Generates 2,200 new positions of employment and as a total provides 4,200 job opportunities to the area
- Purchased $9 million worth of durable goods of which 87 percent were purchased locally
- Added over $7 million to the local credit base
- Generated $4 million in payments to local governments and public schools
- Provides for over $3 million in property taxes paid on local business property committed to college-related activities



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Introduction

Central Community College's objective is, of course, education. However, it has a dramatic impact on the local communities it serves. During the 1986-87 academic year, 6,700 students attended classes on campus and 12,903 students attended classes at numerous off–campus sites. With this enrollment the full-time equivalent reached 2,600 students for the 1986-87 academic year.

Calculating the economic impact of an institution, firm, or organization upon a local economy is a complex process. For Central Community College, because of the diverse location of its classes and faculty, the determination of the impact is all the more complicated.

Twenty-five mid-state counties make up the Central Community College area. State legislation merged the Hastings Campus (including its Practical Nursing program in Kearney) and the Platte Campus to become Central Community Technical College Area. The college Administrative Offices moved to Grand Island in 1974. The third campus was formed at Grand Island and began offering courses in 1976.

Although the purpose of the college is educational support of the surrounding communities, it is also a viable economic supporter of these same communities. Central Community College has a direct economic impact on the business volume, individual incomes, job opportunities, and support of local businesses, municipalities, and institutions.

CAMPUS DESCRIPTIONS

Central Community College is a public two-year community college which emphasizes vocational-technical skills and knowledge. The college operates as a locally governed and locally supported governmental and educational entity, separate from both the established elementary and secondary schools and other state and private institutions of higher education.

The Grand Island Campus, located on a 64-acre track near the intersection of Highways 281 and 34 on the southwest edge of Grand Island, offers two-year degrees, one-year diplomas, and one-semester certificates in 17 occupational programs.

The Hastings Campus, located three miles east of Hastings on U.S. Highway 6, offers two- year degrees, one-year diplomas and one-semester certificates in 29 occupational programs on the 600-acre campus. The Hastings Campus also administers the Practical Nursing program located in Kearney. The campus was originally established in 1966 as Nebraska's first area vocational-technical college serving a 17 county area.

The Platte Campus, located four miles northwest of Columbus, offers 12 academic transfer programs, two-year degrees, one-year diplomas, and one-semester certificates

in 19 occupational programs on the 90-acre campus. The Platte Campus was originally established in 1969 as Nebraska's first county–supported community college.

In addition to the on–campus programs, Central Community College offers an extensive community education program of off-campus courses in its 25–county area.

METHODOLOGY AND STUDY CHARACTERISTICS

The methodology of this study uses a model developed by Richard F. Gritz of the University of Colorado. The Gritz model measures the economic impact of public rural community colleges on the local communities' economies. Money enters the local economy through a community college district from both local and external sources.

The model's design uses mathematical formulas consisting of variables and coefficients with procedures for calculating those coefficients. The variables selected for the study are those which have been shown to have the greatest influence. The model's design uses procedures which are inexpensive and easy to apply; yet, give a reliable measure of the college's impact on the community. Data was compiled from college records, local government records, as well as from a survey of faculty, staff, and students of the college. The model allows a community college to measure current short-run economic impacts, project future impacts, and predict the impacts of those college decisions that change the values of variables which influence the impacts.

A survey was distributed to all faculty and staff members, along with a cover letter from the College President during the spring term of 1987-88. The college employs a total of 333 full-time faculty and staff, as well as many part-time and off-campus staff and instructors. This results in a full-time equivalent employment of 386. Two hundred fifteen of the faculty and staff responded to the survey for a return of 56 percent.

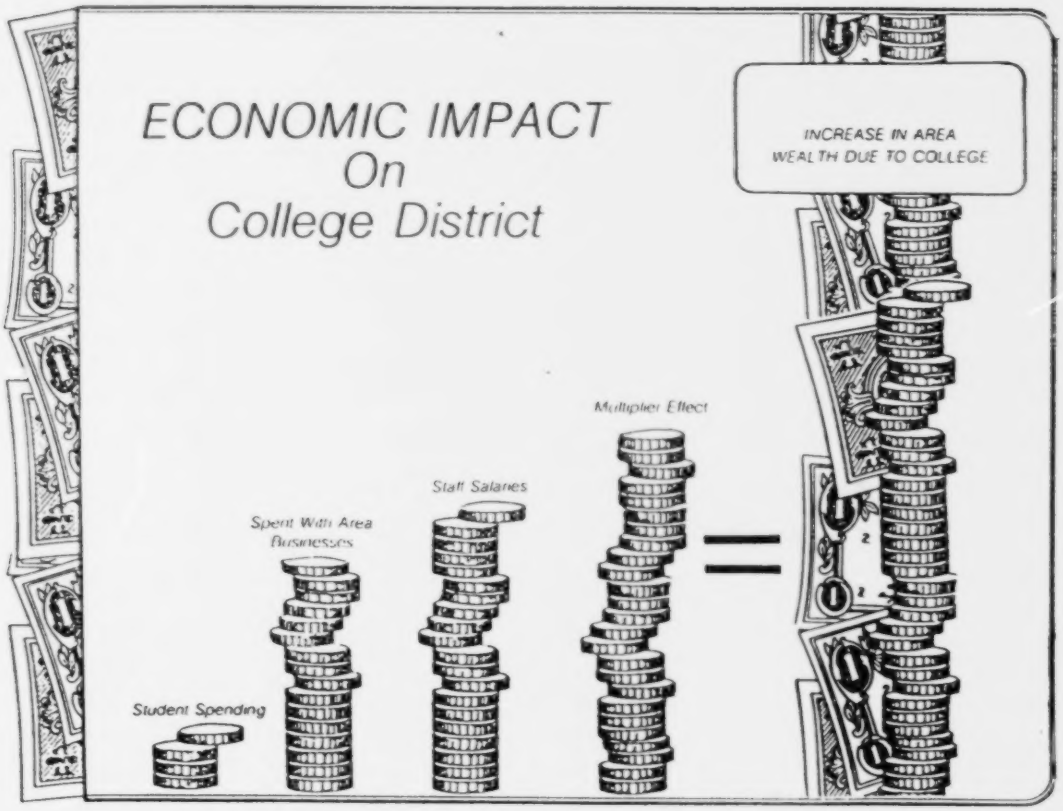
Surveys with a cover letter were distributed to both day and night students during class times. A random sampling of off-campus students completed surveys to provide additional input. There were 724 responses for a return of 28 percent.

The basic objective of both the faculty/staff and student surveys was the collection of data on selected demographic variables and expenditure patterns. Estimates derived from these surveys provide information for inferences about the economic impact of Central Community College. It is important to realize that these estimates of impact can be only as accurate as the information provided by the respondents.

One of the basic components to the spending impact study by any entity is the multiplier effect. The income multiplier is an economic concept which measures the multiple impact of an initial income stimulus and then the repercussions of a direct stimulation to an economy. This study sought to analyze the expenditures by the faculty, staff, students, and the college. It is generally understood that expenditures in a community have a greater effect on the monetary face value of the original spending, the so-called multiplier effect. Multipliers result from respending of income received within the

economic unit. If all spending goes to income and all income is spent within the economy, the multiplier has a very large value. Savings, taxes, and imports reduce the value of the multiplier.

Studies conducted at the Bureau of Business Research at the University of Nebraska-Lincoln suggest that multipliers range from 1.4 to 3.3. A reasonable multiplier for an educational institution would likely range between 1.5 and 2.25. A multiplier of 2.0 was selected for use as the measure for this study. The study was completed using those expenditures of the 1986-87 academic year. Future studies will also make the comparison between academic years studied previously.



The Economic Impact of Faculty, Staff, and Students on the Local Economy

Business Volume

The most widely recognized indicator of the economic impact of an organization is the business volume that is generated. Central Community College generated a total business volume in the surrounding communities of $55,213,335 for 1986-87. With total current general fund operating expenditures of $11,369,698, this means that for every dollar of current operating expenditures, nearly five dollars of local business volume was generated. See Table One below.

Table One

GENERAL FUND GENERATED BUSINESS VOLUME

Operating Expenditures	$11,369,698
Business Volume Generated	$55,213,335
Dollars Generated for Dollars Spent	$4.85

Additional business volume results from the expenditures of the college, faculty and staff, and the students. To determine the direct and indirect impact, the expenditure multiplier is then applied to give the total business volume impact. Tables two through four detail the actual expenditures and resulting business volume of these three groups.

Local expenditures by Central Community College were $14,597,102. Local direct and indirect business volume generated from local expenditures by the college in 1986-87 was $29,194,204. This amount represents approximately 53 percent of the total business volume impact of $55,213,335 on the communities. See Table Two.

Table Two

LOCAL EXPENDITURES GENERATED BUSINESS VOLUME

Local Expenditures	$14,597,102
Business Volume Generated	$29,194,204
% of Total Business Volume	53%

Local expenditures by faculty and staff were $3,711,111. After applying the expenditure multiplier(2.0), the direct and indirect business volume impact of local expenditures

by faculty and staff in 1986-87 was $7,422,222. This represents 13 percent of the total business volume. See Table Three below.

Table Three

FACULTY AND STAFF GENERATED BUSINESS VOLUME

Local Expenditures	$3,711,111
Business Volume Generated	$7,422,222
% of Total Business Volume	13%

Local expenditures by students in 1986-87 were $9,298,455. The local direct and indirect business volume generated by students after applying the same multiplier, was $18,596,910 or 34 percent of the total business volume. See Table Four.

Table Four

STUDENT GENERATED BUSINESS VOLUME

Local Student Expenditures	$9,298,455
Business Volume Generated	$18,596,910
% of Total Business Volume	34%

PERSONAL INCOME

The local property taxes paid in support of the college in 1986-87 were $7,003,052. These taxes provided approximately 36 percent of the total revenue to the college. In comparison, personal income to local individuals in the communities **because of college-related jobs and business activity** was $75,951,900. **Because of other sources of income**, including students sources and state and federal funds, every dollar spent in 1986-87 on local taxes in support of the college resulted in ten dollars in personal income to local individuals and eight dollars in local business volume. See Table Five.

Table Five

PROPERTY TAXES PAID
IN COMPARISON TO PERSONAL INCOME

Local Property Taxes Paid	$7,003,052
% of Total Revenue	36%
Personal Income	$75,951,900
Personal Income Dollars Generated	$10.85
Business Volume Dollars Generated	$7.88

EMPLOYMENT

The college has a continuing impact on the number of local jobs attributable to the presence of the college. There are 4,241 local jobs attributable to Cental Community College's presence. These local jobs include not only jobs directly related to the college, but also those that can be related as a result of expenditures by the college, the faculty and staff, and the students. These positions are approximately 8 percent of the total employment of the three major communities. See Table Six.

Table Six

EMPLOYMENT IMPACT
ON AREA JOB MARKET

Equivalent To	
4,241	Local Jobs
52,479	Employment in the Three Major Communities
8%	% of Total Employment

DURABLE GOODS

The value of durable goods purchased with income from college-related jobs and business activity in 1986-87 was $9,873,747. There is no assurance that all of the durable goods purchased were made locally. However, if the results of this study are consistent to durable goods as well as other goods, 87 percent of the durable goods purchased were made locally. Therefore, the value of locally purchased durable goods was $8,590,159. See Table Seven Below.

Table Seven

	DURABLE GOODS
Total Goods Purchased	$9,873,747
Locally Purchased Goods	$8,590,159

CREDIT BASE

The presence of the college has an important impact on local credit availability. College-related deposits in local banks contributed $7,482,192 to the local credit base. These deposits are funds that are available for business or personal loans to the communities. The economic impact of these additional monies into the communities through the loan recipients has not been included in this study. The college, faculty and staff, and students are all important depositors in local banks.

$7,482,192

Deposited in Area Checking & Savings

=

EXPANSION OF AREA CREDIT BASE

Additional Purchasing Power of Area Residents

IMPACT ON AREA AGENCIES

The presence of the college also has an impact on the revenues received by local governments. The local governments (City and County) and public schools receive local and state tax monies to provide services to Central Community College, its faculty and staff, students, and other community residents that are affected by college related activities. College-related revenues received by these agencies amounted to $4,151,021. This is 59 percent of the $7,003,052 in local taxes paid in support of the college. See Table Eight.

Table Eight

REVENUES GENERATED BY EXISTENCE OF THE COLLEGE

Received by Local Governments	$4,151,021
Taxes Paid in Support	$7,003,052
% of Tax Revenues Returned to Local Agencies	59%

Local government provided municipal and public school services do incur costs that can be attributed to the college and its activities. For 1986-87 those costs were $589,928. These added operating costs might or might not have occurred if not for the presence of the college, it is possible that some of the individuals with the college would have been in the community. The added cost is only 14 percent of the revenues received by these same agencies. See Table Nine below.

Table Nine

OPERATING COSTS

Local Governments & Public Schools	$589,928
% of Revenues Returned	14%

PROPERTY VALUES

The value of local business property committed to college-related business in 1986-87 was $8,649,581. Property taxes paid on that local business property was $3,248,830. See Table Ten.

Table Ten

PROPERTY COMMITTED TO COLLEGE ACTIVITIES

Value of Property	$8,649,581
Property Taxes Paid	$3,248,830

REVENUE SOURCES

The following table outlines all sources of revenue that Central Community College receives.

GENERAL	
State Appropriations	$3,605,293
Local Property Tax	7,003,052
Enrollment Fees	1,369,576
TOTAL	$11,977,921
Federal	$1,867,794
Other Local	376,800
SPECIAL REVENUE	
Local	$1,483,557
Other	252,092
STUDENT FINANCIAL AID	
Federal	$2,933,874
State	358,632
Local	139,777
TOTAL REVENUE RECEIVED BY THE COLLEGE (Summarized by Source)	
Local	$ 9,003,186
Non-Local	10,387,261
Total	19,390,447

Local Percent	46%
Non-Local Percent	54%

As summarized above, a portion of the economic indicators used thus far in the report can be attributed to outside sources brought in by the presence of the college. The three major impacts – Business Volume, Employment, and Personal Income – are described in the tables below, showing the **additional impact by these outside resources**.

NON–LOCAL BUSINESS VOLUME

Business Volume	55,213,335
New Business Volume	29,577,210

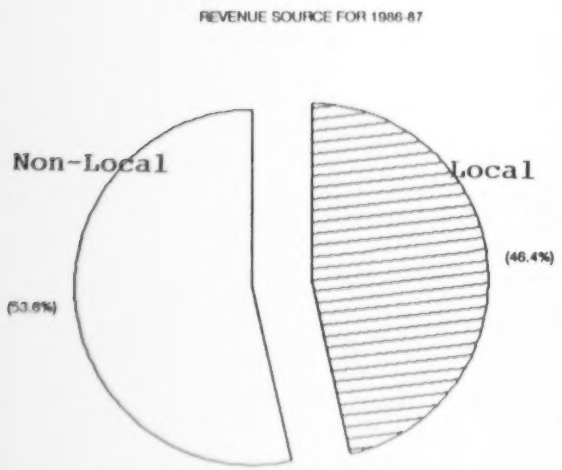
NON–LOCAL EMPLOYMENT

Employment	4241
New Employment	2272

NON–LOCAL PERSONAL INCOME

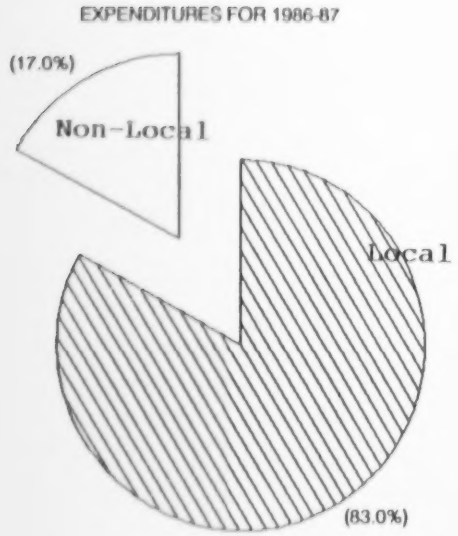
Personal Income	75,051,900
New Personal Income	40,204,523

LOCAL EXPENDITURES VS LOCAL REVENUES



Of the total revenue for Central Community College, only 46.6 percent is from local sources, but, 83 percent of the total expenditures is spent locally.

Of the $14,597,102 in total expenditures, $12,115,595 is spent locally. Of these local expenditures, $6,773,055 is funded from local sources with $5,342,539 funded by non-local sources.



In summary, all local funds contributed to Central Community College are returned to the local economy, as well as an additional near–equal amount from outside sources.

CONCLUSION

This report cannot and is not intended to measure the social and cultural impact of Central Community College on the local communities. However, the educational impact of Central Community College on these areas is not the sole extent of the existence of the college.

When analyzing the impact of the college, items not measured but of importance include economic outcomes and human characteristic outcomes to the student. For example, did the student receive an increase in compensation because of the college programs he/she completed? Was the student's standard of living improved? Was there a change in their human makeup with regard to aspirations, competence and skills, personality and personal coping characteristics?

Other impacts of the college that were not investigated were within the community itself. What decision weighing factor was allotted to the college when a business made the decision to locate within the Central Community College service area? How many service groups are aided by the college personnel and student efforts? Would those efforts have existed without the presence of the college?

The preceding study has shown conclusively that Central Community College has a definite economic impact upon the communities it serves. Directly, this impact is shown through the generation of business volume, employment opportunities, personal income, the purchase of durable goods, and the expansion of the local credit base in area banking institutions. Less direct impacts are in the areas of support to local businesses, governments, and public school services. This is through property values and property taxes paid as well as state–aid revenues received as a result of college–related influences.

In addition, it has been shown that the local dollars received in support of Central Community College are more than returned to the community. These support dollars are even compounded as a result of outside revenues received by the college that are in turn spent within the local communities.

Therefore, Central Community College is not only an institution with educational, social, and cultural influences, but it is also a major factor in the economic influences of the 25–county area of Nebraska in which it resides.

GLOSSARY OF TERMS

Availability of Funds – Monies that are unencumbered that may be used for loans both business and personal.

Business Volume – Local expenditures by the college, faculty and staff, and by students which is then affected by the multiplier. The result being the amount of business activity that results from direct and indirect expenditures of the above categories.

Coefficients – Any of the factors of a product considered in relation to a specific factor, a constant factor of a term as distinguished from a variable.

College–Related – Those economic activities attributed to employees, students, or staff, as well as the financial operations of the college.

Credit Base – The value of local time-deposits and demand-deposits of faculty and staff, students, and the college itself.

Cultural – Those acts that develop the moral and intellectual faculties.

Demographic (Variables) – Statistics of populations with reference to size, distribution, and vital statistics and those changes that occur within those statistics.

Direct Business Volume – The expenditures of the college, faculty and staff, and students that generate business activity.

Durable Goods – Products that can be said to have a life–span; i.e., furniture, appliances, automobiles, and equipment.

Economic – Relating to or based upon the production, distribution, and consumption of goods and services.

Employment – The respending of income creates jobs that are supported by indirect expenditures. Therefore, the employment represented is a result of jobs created from direct spending multiplied by the results of indirect spending.

Expenditure Patterns – Observable characteristics of spending traits.

Full–Time Equivalent Students – Full–time status is recognized for students registered for 12 or more credits.. Therefore, 120 credits would be considered ten full–time equivalent students.

Full–Time Equivalent Faculty and Staff – Working hours totaling 40 per week is considered full–time. Therefore, 120 hours worked per week would be considered three full–time equivalent faculty or staff. Contract employees are counted as one FTE.

Local Expenditures – Expenditures that are conducted within the surrounding county.

Multiplier Effect – The indirect impact of expenditures through the respending within an economy of a portion of income received by an individual or business in that economy.

Personal Income – Income of local individuals resulting from college–related employment generation and business activity.

Public Rural Community Colleges – Community colleges serving the general public in a rural environment.

Revenues – Sources of income.

Social – Relating to human society, the interaction of the individual and the group, including the welfare of human beings as members of society.

Short–Run Economic Impact – Impacts that have an immediate return, such as current payroll and expenditures.

Variables – A quantity that may assume any one of a set of values, dependent on another factor or another process.

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